

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ernest J. Storrer

Attorney Docket No. INJS-1-1003

Serial No.: 10/785,383

Group Art Unit: 3743

Filing Date: February 24, 2004

Examiner: Jiping Lu

Title: **SYSTEM AND METHOD FOR REMOVING MOISTURE FROM WATER LADEN STRUCTURES**

I. DECLARATION OF KEN LARSEN

I, Ken Larsen, CR, WLS, CSDS, declare as follows:

1. My CV is attached hereto as Exhibit A.

2. I am a Certified Restorer (NIDR) CR ; a Water Loss Specialist (WLI) WLS; a Council Certified Structural Drying Supervisor (ACAC) CSDS; a Master Cleaner certified by both Institute of Inspection, Cleaning and Restoration Certification (IICRC) and ARCA; a Master Restorer (IICRC). I have extensive experience as a Remediation Technician; in Carpet Cleaning, Upholstery and Fabric Cleaning, in Water Damage and in Water Damage Restoration, in Odor Control, Color Repair, Carpet Repair Reinstallation and Repair, and Fire and Smoke Restoration. I have experience as an Applied Microbial Remediation Technician, in Applied Structural Drying, in Health and Safety, and as a Commercial Drying Specialist. I have Journeyman status in Cleaning, and in both Restoration (Water) and Restoration (Fire).

3. I have taught at numerous conferences, and written and published extensively in the field of remediation. A full list of my publications and teaching is in my CV.

4. I am also an inventor of patent pending equipment for remediation.

5. I have reviewed U.S. Patent Nos. 1,713,398 to Rountree; 3,150,029 to Ferrand; 3,506,747 to Creskoff; 3,811,287 to De Winter; and 4,203,714 to Wenander.

6. I would never consider that the field of cotton harvesting, the area of U.S. Patent No. 1,713,398 to Rountree, has any bearing on the work I do. I know of no one working in the remediation

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field, nor have I ever read or heard anyone in this field, suggest that cotton harvesting, or any agricultural implements, are useful for our work, or provide guidance of any sort to us in our field.

7. Similarly, neither I nor anyone I know of in this field would consider that the field of plant cultivation, the field of U.S. Patent No. 3,150,029 to Ferrand, has any bearing on our work. I have never read nor heard of anyone using any tools or learning from that field as a guide or starting point for any work in our industry.

8. The area of underwater soil erosion control is equally foreign to our industry. The field of U.S. Patent No. 3,811,287 to De Winter is simply not an area on which we rely, or to which we turn for ideas or training.

9. The same is true for the field of concrete formation for building construction, the areas of U.S. Patent Nos. 3,506,747 to Creskoff and 4,203,714 to Wenander. These areas of endeavor are not related to cleaning and remediation. They address drastically different problems, and are not fields we look to for guidance.

10. For example, much material used in building construction contains significant amounts of water during the building phase. Lumber is often 'green' or wet during construction. Yet it is the job of building remediation to restore that structural wood to dry – a dryness level it often did not have during the construction phase. The methods we have for dealing with these products are nothing like the methods used by the building construction industry.

11. Concrete in particular is an excellent example of why we do not look to any building trades for guidance on our work. Concrete is created by mixing powder and particulate – Portland cement and 'aggregate' or gravel – with water. To the building construction industry, these are vital components of a new structure. But to the cleaning and remediation industry, they are all waste products to be removed and discarded. Construction mixes cement, gravel, and water to make a building. Remediators sweep, vacuum, and otherwise extract loose cement and gravel, and extract destructive water to restore a building to habitable.

12. This difference can be seen quite clearly in the two cited patents. Both are concerned with controlling the rate of a chemical reaction in wet concrete – a process known as ‘curing’. Concrete, once mixed, does not simply ‘dry’ in the sense of losing water like a towel or sponge. Rather, a complex set of chemical reactions take place, which result in the expulsion of some of the water initially added to the mixture, but also other changes that result in a different material at the end of the curing process. Both patents speak to ways to modify the characteristics of the final product by affecting the rate of that reaction.

13. The building remediation industry, by contrast, is not interested in modifying the strength of the structure, or chemical reactions in concrete. To us, concrete is simply a sponge: a hard, porous stone capable of absorbing water that it should not contain and which must be removed – water that will not naturally be expelled.

14. Our focus is on restoring the building to the way it was before a disaster. We do not look to the field of building construction – they create the buildings we clean, but do not offer us tools, materials, guidance, or ideas on returning water, smoke, or fire damaged buildings to habitability.

15. “Wet concrete” to the construction industry is a raw material that can be poured, shaped, and smoothed. It expels water naturally once it comes off the concrete truck, until it cures and a building is built on or around it.

16. “Wet concrete” to the remediation industry is a solid, unchangeable part of a building that has absorbed water, in a way it should not, as a result of some problem in the building – a flood, burst pipe, water from fire hoses, etc. To our industry, it is not a natural state, a part of its usefulness, as it is to the construction industry. Our goal is to extract the water that should not be there, clean the surfaces, remove odors, and restore the concrete to the state it was when the construction industry got done.

17. Because the construction industry intentionally works with wet, pliable, pourable concrete, and we must work with solid, hard, immovable, although porous and sometime saturated concrete, we do not look to their tools and experience for guidance. The “wet concrete” they work with is simply utterly

16. "Wet concrete" to the water damage remediation and restorative drying industry is a solid, unchangeable part of a building that has absorbed an undesirable quantity of excess water, in a way it should not. This is frequently the result of some mechanical problem in the building, human error, or a natural geological or meteorological occurrence – a flood, burst pipe, water from fire hoses, etc. To our industry, excessive quantities of water in a concrete material is not a natural or acceptable condition for a cured concrete substrate, nor is the excess water a part of its usefulness and design, as it is to the construction industry. Our goal is to extract the water that should not be there, clean the surfaces, remove odors, and restore the concrete to the state it was when the construction industry determined the concrete was an acceptably finished product.

17. Because the construction industry intentionally works with wet, pliable, pourable concrete, and we must work with solid, hard, immovable, although porous and sometime saturated concrete, we do not look to their tools and experience for guidance. The "wet concrete" they work with is simply utterly unlike the "wet concrete" we face in our work. They work with "uncured, wet concrete", and the restorative drying industry works with "wet, cured concrete". I know of no drying tool or technique used on concrete work by builders that is relevant or useful to my own work on concrete in restorative drying and / or remediation.

18. There are some important pieces of information about concrete that are of value to the restorer: If water were evenly distributed through a slab of concrete, a correctly cured slab will have a moisture content of 3.5%. A moisture content of 3.5% or less will not adversely interfere with the adhesion and cure of most concrete coatings and floor adhesives. (Many manufacturers of flooring materials will not guarantee their products if the concrete has moisture content in excess of 5%, with some as low as 3%). In a water damage loss, it is possible for the moisture content of concrete to exceed 10%. (Excess moisture = 7% by weight).

I declare the foregoing is true and correct under penalty of perjury under the laws of the United States of America this 4th day of February, 2011.


Ken Larsen